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O’Heeron et al.(54) **PAIN-REDUCING EFFECTS OF
FIBROBLASTS AND TREATMENT OF PAIN****Publication Classification**(71) Applicant: **Figene, LLC**, Houston, TX (US)(51) **Int. Cl.**
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C12N 5/077 (2006.01)(72) Inventors: **Pete O’Heeron**, Houston, TX (US);
Thomas Ichim, San Diego, CA (US)(52) **U.S. Cl.**
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(2013.01); **C12N 5/0656** (2013.01)(21) Appl. No.: **17/052,859**(22) PCT Filed: **May 3, 2019**(57) **ABSTRACT**(86) PCT No.: **PCT/US19/30596**

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Embodiments of the disclosure include methods and compositions for treatment or prevention of pain in an individual. In specific embodiments, the methods and compositions encompass fibroblasts and/or fibroblast derivatives for the treatment of any kind of pain, including back pain. In particular aspects, exosomes and/or lysate and/or conditioned media from the fibroblasts are provided to an individual in need thereof.